

REMARKS

Claims 55 – 85 are currently pending in this response. Claims 55 - 85 are rejected. Claims 55, 80 and 81 are amended in this response.

Claim Rejections – 35 USC 103

The Examiner rejected claims 55 – 85 under 35 USC 102(e), as being obvious over Helgeson et al. US Patent No. 6643652, and associated application No 2002/0073236, in view of Brown, US Patent Application No. 2003/0061317 and further in view of Arunachalam US Patent Publication No. 2003/0069922A1

Applicant has specifically limited claims 55, 80 and 81 to positively recite that the first and second identity arrangements are 1) within the software objects and 2) contain identities.

Examiner rejects claim 55 inter alia on the ground that the software first and second identity arrangements contained within software objects are to be found in Arunachalam Fig. 6 items 630 and 640.

However Arunachalam item 630 is a hub. A hub is not a software object, nor is it contained in a software object. In this case, the term "hub" refers to a web server, or similar device, as described in paragraph 56. As part of a hub-and-spoke (we note that Arunachalam uses the term "node" instead of "spoke") architecture any identifier of a hub cannot be parallel to an identifier in the present invention, because the relationship of a hub to its spokes requires that the spokes are dependent on the hub, and thus the relationship is essentially different from the relationship of a user and a provider. In the latter case the user and provider are independent of each other.

Thus Arunachalam does not teach a first identity arrangement since item 630 is not an identity arrangement but a hub.

Arunachalam item 640 is a series of nodes. The nodes 640 are web servers connected to hubs in a hub-and-spoke configuration.

In fact item 640 comprises several nodes, so it is not even conceivable that there is a unique identity for the group of nodes. If what the Examiner is assuming is that each node has an identity, this is still not comparable to identities of the present

embodiments, because nodes have a dependent relationship with respect to hubs, as mentioned above.

Since Arunachalam does not have software identity arrangements that are parts of software objects, these identity arrangements cannot manage distributed service and software objects or components. While it is agreed that Arunachalam does have distributed software objects, any identification of hubs and nodes in Arunachalam plays a role essentially different from the first and second identity arrangements of the present embodiments. (It is also noted that hubs and nodes represent two different kinds of entities, while claim 55 of the present invention refers to only one kind of software object.)

No such feature of preservation of a first and second identity arrangement stored with a first software object to allow independent manipulation thereof is taught in either Helgeson or Brown. Arunachalan item 630 is not an identity arrangement contained within a software object and which contains an identity.

Column 5 paragraph 68 of Arunachalam discusses hub 630. It is described as a "service network control center or network operator". This is a far cry from an identity arrangement on a software object as claimed.

Arunachalam item 640 is a series of nodes. These again are computers on a network, each connected to a hub. Item 640 is not an identity arrangement within a software object, each containing an identity. Neither, for that matter are the individual nodes. As noted in Arunachalam paragraph 71, the nodes may serve as "a gateway, portal or entry point into a private or enterprise network of the service provider". This is a far cry from an identity arrangement on a software object as claimed. It certainly would not include an identity of a remote object.

Although these nodes and hub do interact, there is no teaching in the reference of manipulation of remote objects independently through these identity arrangements since Arunachalam does not have identity arrangements within software objects.

Paragraph 133 of Arunachalam does indeed teach allowing a remote object to be called the same thing as a local object. Our understanding of Arunachalam is that a remote object can be called in the same way as a local object, however, not that a remote object can be substituted for a local object.

Irrespective of this understanding, Arunachalam's teaching is the *exact opposite* of what is claimed, where each object has a *unique* identity, and is therefore not interchangeable with another object.

Thus, precisely Arunachalam paragraph 133 would lead the skilled person reading Hegelson and Brown to abandon unique identities.

The skilled person would naturally read the paragraph pointed to by the Examiner, but would in fact be misled by the teaching there and would not provide unique identities to his objects.

As a result, independent data manipulation as claimed cannot be guaranteed.

As the Examiner accepts (page 4 last paragraph) that Hegelson and Brown fail to teach

wherein said first and said second identity arrangements, being contained within said hosted software objects and comprising said respective unique identities, enable a plurality of remote entities to access said enablement data of a first of said hosted software objects simultaneously, said respective host and second identity arrangements being preserved with said access such that manipulations of said software object by any one of said remote entities is independent of manipulation of said remote object by any other remote entities, and wherein each respective second, relationship, identity is transferrable with correspondingly independently manipulated data to another one of said hosting servers for a second manipulation with a further software object at said another hosting server, said second manipulation preserving said second, relationship, identity, thereby allowing said respective remote entity to retain a relationship with said further software object after manipulation thereof through said first software object,

and that the items pointed to an Arunachalam are in fact a hub and spokes in dependent relation, and not identity arrangements stored in software objects and containing software, it is believed that the rejections are overcome.

Furthermore, as stated, paragraph 133 of Arunachalam teaches away from providing unique identities to objects, contrary to what is claimed, so that when

Arunachalam is combined with Hegelson and Brown, the skilled person is prevented from arriving at the present invention.

As a side issue, Applicant still cannot accept the logic of the Examiner in claiming that the hosting servers holding a first identity is found in the XML protocol of Hegelson. While it is true that XML protocol *could* be used for many purposes, the reference does not teach an identity arrangement holding an identity of a hosting server. Examiner is required to find the actual feature claimed, not something that the reference could have done but did not.

Equivalent amendments have been made to independent claims 80 and 81, which are believed to be inventive for the same reasons.

The inventor adds the following notes on Arunachalam:

Arunachalam does, indeed, like the present invention, address the problem of involving multiple, remote, entities in a single transaction, however it addresses a much lower-level set of problems, now usually addressed by Web Services. This paragraph best expresses Arunachalam's goals:

[0012] As the Web expands and electronic commerce becomes more desirable, the need increases for robust, real-time, bi-directional transactional capabilities on the Web. A true real-time, bi-directional transaction would allow a user to connect to a variety of services on the web, and perform real-time transactions on those services.

This need, in fact, was subsequently met by what are now called "Web Services". Web Services comprise part of the background of the present invention.

The present invention addresses the higher-level problem of how to integrate multiple, remote, entities in a single transaction **ad-hoc**. The obvious solution for integrating multiple, remote, entities in a single transaction is the one that Arunachalam does, in fact, give as the embodiment of its invention: a hub-and-spoke architecture (Arunachalam uses the term "node" instead of "spoke"):

[0048] ... Advantageously, this may allow sophisticated, real-time, multi-service provider transactions to be performed while allowing one entity (e.g. a context owner) to control the transaction.

The problem, for the purpose of the present invention, is that integration using a hub-and-spoke architecture cannot be ad-hoc. The hub must be integrated with its spokes before the spokes can interact, since it is the hub that controls the transaction:

[0056] ... The term "hub" will broadly be used to refer to one or more functionally coupled computer systems (e.g. a web server server) that provide software and methods to control a transaction or service involving multiple service providers.

One of the central features of the present invention is that it eliminates this need by eliminating the hub.

To use Arunachalam's example to illustrate the present invention: A customer wants to buy a car, and pay for it from his bank account. Using Arunachalam's solution, the customer would purchase the car from the car dealer, then the car dealer would connect to the bank using the Arunachalam invention (or, more realistically, Web Services), and get the money. In this case the car dealer is the "hub" and the bank is the "spoke". This solution would require previous integration of the car dealer with the bank, otherwise the car dealer wouldn't even know of the existence of the bank's interface, let alone how to use it. On the other hand, using the present invention, no prior integration is necessary. Why? Because the customer "owns" an object in the bank's web site, called his "bank account object," as indicated by the object's second identity arrangement (the object's first identity arrangement identifies the bank, its third identity arrangement identifies the specific account object, since the same customer is likely to "own" many "bank objects" of different kinds). That object "belongs" to the customer to do what he wants with it. Similarly, the customer "owns" a "car object" in the car dealer's web site, which also "belongs to him". The present invention provides a way for objects to describe themselves (claims 59 and 60), enabling the customer to simply drag-and-drop the "account object" on the "car" object to pay for it. The objects will know what to do because they are both self-described. There are no identity arrangements in Arunachalam similar to the first and second identity arrangements that enable a user to "own" objects which are supplied by service provider's web sites.

Conclusion

All the matters raised by the Examiner are believed to have been dealt with.

Claims 55, 80 and 81 are believed to be inventive over the combination of Hegelson and Brown.

All the dependent claims are believed to be allowable as being dependent on allowable main claims.

All the matters raised by the Examiner have been dealt with and allowance of the application is respectfully awaited.

Respectfully submitted,

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